

REMARKS

Favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Claim 1 has been amended to incorporate the subject matter of claim 3. Claims 3 and 4 are cancelled without prejudice. Claims 15, 20 and 21 are also cancelled without prejudice.

Claim 1 has been further amended as follows:

The term "light response" has been defined to be a light response in form of L^* values or to be a light response in form of the optical density OD. Basis for this amendment is given in Fig. 5A and in Fig. 5B. See also page 10, line 23 to page 11, line 8.

Furthermore, the time-temperature indicator (TTI) is defined to be a TTI which has photochromic properties. Basis for this amendment is given on page 9, line 2.

Turning to the Official Action, claims 1, 3-4 and 11-14 are rejected under 35 USC 103 as unpatentable over Simons. This ground of rejection is respectfully traversed as applied to the amended claims.

Simons uses a diffusible dye. When the device is exposed to a temperature above the critical point, the dye starts to diffuse (column 6, line 45) and the background of the bar code darkens. The bar code is unreadable.

The Simons TTI system only gives a light/dark response. This is a simple "yes/no" visual readout.

As mentioned on page 2 of the specification, a quantitative assessment of freshness all along the supply chain is required. In the system of this invention, a quantitative evaluation of the remaining shelf life is possible by measuring the color values L^* . The quantitative reading allows a continuous control of the TTI. There is no hint in Simons U.S. 6,514,462 how to measure the color values L^* .

Claims 5-9 are rejected under 35 USC 103 as unpatentable over Simons in view of Tamura. This ground of rejection is respectfully traversed as applied to the amended claims.

Tamura provides an irreversible time temperature indicator (column 1, line 60). It changes its color at a certain temperature and does not return to its original color (column 1, line 30). The color is changed according to crystalline or non-crystalline state, or phase separation

(claim 1). The glass transition temperature of the TTI must be high enough so that the TTI does not develop a color in the normal time upon loading the object of control into a truck (short warming up). Column 8, line 23.

In contrast, the claimed time temperature indicator is independent of a certain glass transition temperature because the color values L^* are measured over the whole shelf life time. A continuous control is possible.

This ground of rejection is thus deemed untenable.

Claims 15 and 20 are rejected under 35 USC 103 as unpatentable over Simons in view of Simunovic et al.

This ground of rejection is overcome by cancellation of the rejected claims.

Claims 9-10 are rejected under 35 USC 103 as unpatentable over Simons in view of Zalameda et al. This ground of rejection is respectfully traversed as applied to the amended claims.

Zalameda et al. teach a thermal inspection system based on the application of heat onto the surface of the structure to be inspected. Typical heat sources used are flash lamps. The short duration intense light is absorbed by the surface to be inspected and a temperature rise is produced. A device such as in an infrared detector is used to measure small differences in the surface temperature as the sample cools down. No color development or color bleaching is measured.

Lastly, claims 20-21 are rejected under 35 USC 103 as unpatentable over Simons in view of Ghiron et al.

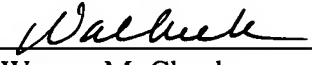
This ground of rejection is overcome by cancellation of the rejected claims.

Claims 16-19 are not subject to rejection and should be allowed.

In view of the foregoing, it is believed that each ground of rejection set forth in the Official Action has been overcome, and that the application is now in condition for allowance. Accordingly, such allowance is solicited.

Respectfully submitted,

Dietrich HAARER et al.

By: 
Warren M. Cheek
Registration No. 33,367
Attorney for Applicants

WMC/dlk
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
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